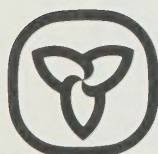
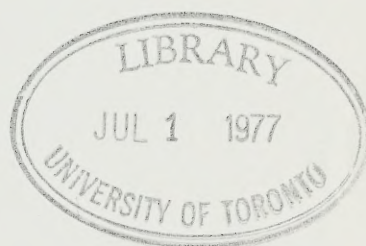


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SUMMARY OF MINING ACCIDENT STATISTICS AND EMPLOYMENT 1975



Ontario

Ministry of
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SUMMARY OF
MINING ACCIDENT STATISTICS
AND EMPLOYMENT
1975

BULLETIN 175

Mines Engineering Branch
1976



Ministry of
Natural
Resources

Hon. Leo Bernier
Minister

Dr. J. K. Reynolds
Deputy Minister

SUMMARY OF MAN-HOURS AND NON-FATAL ACCIDENTS IN 1975

During 1975, at the mines, metallurgical works, quarries, clay, shale, sand and gravel pits, and contract diamond-drilling operations, regulated by the Mining Act, there were 4,565 accidents reported to the Mines Division, Ministry of Natural Resources up to January 19, 1976. Of these, 15 were fatalities and 4,550 were non-fatal compensable injuries.

A non-fatal compensable injury is one involving lost time for which the Workmen's Compensation Board has made compensation payments. Since the beginning of compensation in 1915 the lost-time waiting periods have been as follows: 1915 to 1952, seven days; 1952 to 1963, five days; 1963 to 1968, three days; 1968 to present, one day.

This report shows a fatality rate of 0.18 per million man-hours, a decrease of 0.11 from 1974 and a decrease of 0.13 from the average of the last 25 years. There were 53.9 non-fatal accidents per million man-hours which is an increase of 1.5 from the 1974 total and an increase of 20 over the average of the last 25 year.

The total employment figures show an increase of 4.1 percent from 45,323 in 1974 to 47,196 in 1975. The number of man-hours at mining operations increased from 84,115,000 in 1974 to 84,389,000 in 1975.

Region	Number of thousand man-hours worked at operations under jurisdiction of department Engineering Branch												
	Producing Operations				Non-Producing Operations				Total of All Operations		Non-Fatal Accidents		
	Surface	Under-ground	Total		Surface	Under-ground	Total		Surface	Under-ground	Total	Total Non-Fatal	Rate per Million Man-Hours
Algonquin	303	35	338		93	2	95		396	37	433		
Central	139	153	292		—	—	—		139	153	292		
Eastern	454	216	670		—	—	—		454	216	670		
North Central	2470	1548	4018		8	—	8		2478	1548	4026		
Northeastern	13450	16680	30130		238	275	513		13688	16955	30643		
Northern	5900	4416	10316		190	7	197		6090	4423	10513		
Northwestern	2322	1486	3808		257	228	485		2579	1714	4293		
Southwestern	228	379	607		—	—	—		228	379	607		
Total Mines	25266	24913	50179		786	512	1298		26052	25425	51477	3402	66.1
Contract D. Drill	847	—	847		—	—	—		847	—	847	80	94.5
Total Mines and Contract D. Drill	26113	24913	51026		786	512	1298		26899	25425	52324	3482	66.5
Metallurgical Works	20697	—	20697		—	—	—		20697	—	20697	853	41.2
Quarries	3587	—	3587		—	—	—		3587	—	3587	128	35.7
Clay, Sand & Gravel Pits	7781	—	7781		—	—	—		7781	—	7781	87	11.2
GRAND TOTAL	58178	24913	83091		786	512	1298		58964	25425	84389	4550	53.9
Rate/1,000,000 man hours													

ACCIDENT and EMPLOYMENT STATISTICS

Introduction

As in 1974, the field staff in the eight Ontario Regional Offices of the Mines Engineering Branch collected and classified the data. This bulletin was compiled by the staff of Mineral Resources Branch with the help of Main Office staff of the Mines Engineering Branch.

The summary on the opposite page indicates an increase of 3.29% in non-fatal accidents, from 4,405 in 1974 to 4,550 in 1975. However, the number of fatal accidents decreased by 37.5%, from 24 in 1974 to 15 in 1975. The total number of accidents increased by 3.07%, from 4,429 in 1974 to 4,565 in 1975.

On the other hand, employment was up from 45,323 in 1974 to 47,196 in 1975, an increase of 4.13%. However, the number of million man-hours increased by merely 0.33%, from 84,115 in 1974 to 84,389 in 1975. As the number of non-fatal accidents increased faster than the number of million man-hours, the non-fatal accident rate increased from 52.4 in 1974 to 53.9 in 1975.

The fatality rate per million man-hours decreased from 0.29 in 1974 to 0.18 in 1975. The 1975 total of only 15 fatalities was the same as in 1973 and was lowest in last 25 years. The decrease was due to a decrease in the number of fatalities for group 1 — underground at mines — from 16 in 1974 to 4 in 1975.

CLASSIFICATION OF OPERATIONS

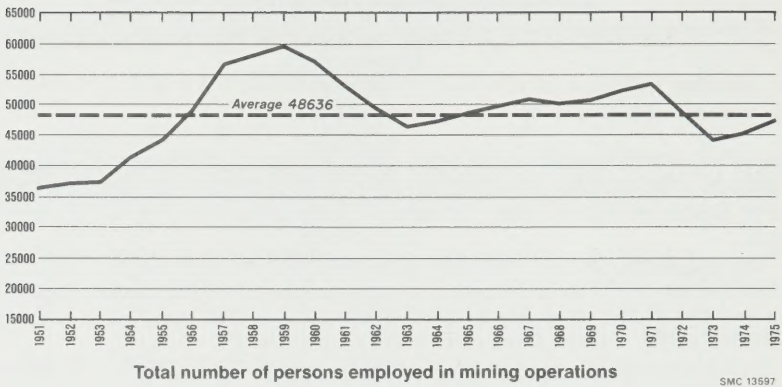
	MEN EMPLOYED
Group 1. Mines, underground ¹	14,925
2. Mines, surface	14,177
3. Metallurgical works	12,095
4. Quarries	1,722
5. Clay, shale, sand, and gravel pits	3,855
6. Contract diamond-drilling	422
7. Operations in the mining industry for which fatalities are not included in fatal accident rates	
Total	47,196

¹Open-pit mining of nepheline syenite, iron, nickel, copper, etc. (as distinct from rock quarries) is included in Group 1.

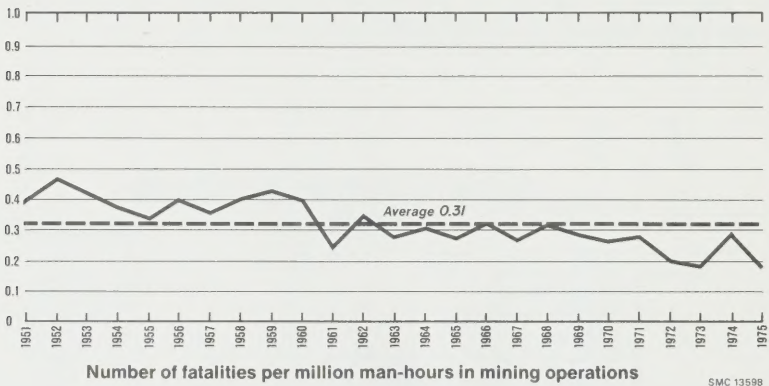
EMPLOYMENT AT MINES (GROUPS 1 AND 2)

YEAR	UNDERGROUND (GROUP 1)		SURFACE (GROUP 2)		TOTAL
	NUMBER	PERCENT	NUMBER	PERCENT	
1966	17,369	61	11,292	39	28,661
1967	17,461	59	12,147	41	29,608
1968	17,892	59	12,247	41	30,139
1969	17,422	58	12,681	42	30,103
1970	17,702	57	13,290	43	30,992
1971	17,663	55	14,365	45	32,028
1972	14,691	50	14,470	50	29,161
1973	12,670	49	13,368	51	26,038
1974	13,905	50	13,543	50	27,448
1975	14,925	51	14,177	49	29,102
Total	161,700		131,580		293,280
Average	16,170	55	13,158	45	29,328

1-Employment

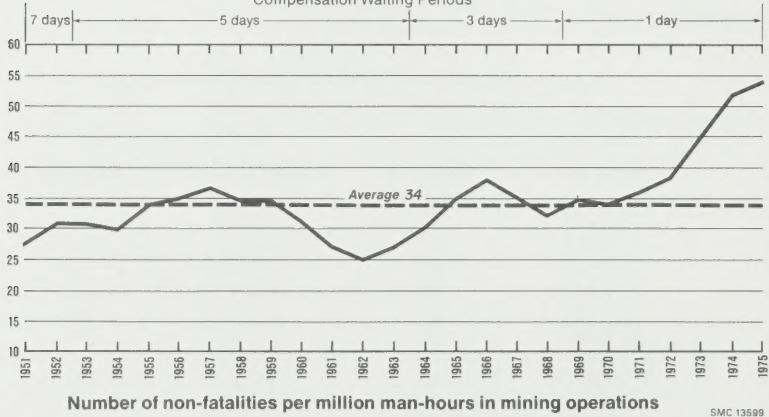


2-Fatal Accidents



3-Non Fatal Accidents

The Workmen's Compensation Board of Ontario
Compensation Waiting Periods



Summary of Employment and Fatal and Non-Fatal Accidents

The following table is a summary of the number employed and the number injured per million man-hours at mining operations in the past 25 years.

EMPLOYMENT AND ACCIDENTS TO EMPLOYEES AT MINES (GROUPS 1-6)

YEAR	NUMBER EMPLOYED	PERSONS INJURED			NUMBER OF MILLION MAN-HOURS			RATE PER MILLION MAN-HOURS	
		FA- TALLY	NON- FATALLY	TOTAL	PRO- DUCING OPERA- TIONS	NON- PRO- DUCING OPERA- TIONS	TOTAL	FA- TALLY	NON- FA- TALLY
1951	36,729	34	2,387	2,421	86.827	1.322	88.149	0.39	27
1952	37,261	41	2,697	2,738	88.222	1.205	89.427	0.46	30
1953	37,401	37	2,654	2,691	88.274	1.488	89.762	0.41	30
1954	41,784	33	2,668	2,701	88.450	2.282	90.732	0.36	29
1955	44,366	32	3,202	3,234	91.903	4.118	96.021	0.33	33
1956	49,035	41	3,555	3,596	98.834	6.610	105.444	0.39	34
1957	56,758	42	4,254	4,296	113.405	6.210	119.615	0.35	36
1958	58,124	44	3,861	3,905	111.575	0.881	112.456	0.39	34
1959	59,474	49	4,122	4,171	118.832	1.479	120.311	0.41	34
1960	56,694	44	3,502	3,546	115.716	1.229	116.945	0.38	30
1961	52,710	25	2,827	2,852	106.314	0.743	107.057	0.23	26
1962	49,314	34	2,467	2,501	101.679	0.681	102.360	0.33	24
1963	46,562	25	2,510	2,535	95.020	0.781	95.801	0.26	26
1964	47,309	28	2,854	2,882	96.450	1.018	97.468	0.29	29
1965	48,979	26	3,436	3,462	99.811	1.357	101.168	0.26	34
1966	49,901	31	3,624	3,655	95.793	2.662	98.455	0.31	37
1967	50,701	26	3,348	3,374	97.359	2.408	99.767	0.26	34
1968	50,661	33	3,353	3,386	102.470	1.164	103.634	0.32	32
1969	50,995	25	3,141	3,166	87.749	2.396	90.145	0.28	35
1970	52,797	28	3,561	3,589	102.038	2.225	104.263	0.27	34
1971	53,567	29	3,640	3,669	100.752	1.388	102.140	0.28	36
1972	48,047	18	3,368	3,386	88.944	.569	89.513	0.20	38
1973	44,205	15	3,364	3,379	81.348	.587	81.935	0.18	41
1974	45,323	24	4,405	4,429	82.749	1.366	84.115	0.29	52
1975	47,196	15	4,550	4,565	83.091	1.298	84.389	0.18	54
Total	1 215,893	779	83,350	84,129	2,423,605	47.467	2,471,072	—	—
Average	48,636	31	3,334	3,365	96.944	1,899	98.843	0.31	34

Fatal Accidents

FATALITY RATE PER MILLION MAN-HOURS (GROUPS 1-6), 1975

	MILLION MAN-HOURS	NUMBER KILLED	RATE PER MILLION MAN-HOURS
Group 1. Mines, underground	25.425	4	0.16
2. Mines, Surface	26.052	4	0.15
3. Metallurgical works	20.697	2	0.10
4. Quarries	3.587	1	0.28
5. Clay, shale, sand, and gravel pits	7.781	4	0.51
6. Contract diamond-drilling	.847	0	0.00
Total	84.389	15	0.18

A COMPARISON OF FATAL ACCIDENTS AND FATALITIES (GROUPS 1-6)

DISTRIBUTION	1971					1972					1973					1974					1975				
	ACCIDENTS KILLED					ACCIDENTS KILLED					ACCIDENTS KILLED					ACCIDENTS KILLED					ACCIDENTS KILLED				
Group 1. Mines, underground	17	17	17	17	17	9	9	9	9	9	9	9	9	9	9	16	16	16	16	16	4	4	4	4	4
2. Mines, surface	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0	0	0	0	0	4	4	4	4	4
3. Metallurgical works	5	5	5	5	5	1	1	1	1	1	2	2	2	2	2	1	1	1	1	1	2	2	2	2	2
4. Quarries	3	3	3	3	3	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1
5. Clay, shale, sand, and gravel pits	0	0	0	0	0	3	3	3	3	3	1	1	1	1	1	5	5	5	5	5	4	4	4	4	4
6. Contract diamond-drilling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	28	28	29	29	29	17	17	18	18	15	15	15	15	15	15	24	24	24	24	24	15	15	15	15	15

A COMPARISON OF FATALITIES BY MONTHS (GROUPS 1-6)

	1951	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	TOTAL AVERAGE	
January	5	3	4	1	2	6	3	6	3	2	2	4	3	4	2	2	0	1	1	3	0	2	2	3	3	67	2.7
February	2	2	4	5	2	5	1	2	2	1	2	3	2	2	2	0	2	4	1	2	2	2	2	0	0	52	2.1
March	2	3	4	3	1	2	1	2	5	3	0	6	1	0	1	3	4	1	4	2	7	3	0	1	1	60	2.4
April	3	2	2	1	0	3	2	4	4	2	4	3	2	3	1	2	3	2	3	3	0	0	2	3	2	56	2.2
May	4	10	1	1	3	6	4	4	4	5	3	4	0	1	1	5	1	3	0	1	2	2	2	3	2	72	2.9
June	2	5	2	3	4	0	5	5	5	5	3	2	3	1	2	4	4	4	3	0	1	1	1	2	0	67	2.7
July	5	5	2	5	0	3	1	3	4	4	2	2	2	4	2	0	4	0	2	3	2	1	1	2	1	60	2.4
August	1	3	2	1	3	2	5	3	2	5	2	4	1	4	4	5	1	6	1	4	4	1	0	2	2	68	2.7
September	2	2	5	1	5	3	9	3	5	2	2	2	4	3	2	2	1	2	2	2	0	2	2	0	3	66	2.6
October	4	1	3	7	1	5	8	5	4	3	3	3	1	1	5	0	2	4	2	2	7	1	1	0	1	74	3.0
November	2	1	3	4	9	1	2	4	6	7	1	1	4	3	1	6	2	4	4	1	1	3	1	6	0	77	3.1
December	2	4	4	1	2	5	1	3	3	5	1	0	2	2	3	2	2	2	2	5	3	0	1	2	0	57	2.3
Total	34	41	36	33	32	41	42	44	47	44	25	34	25	28	26	31	26	33	25	28	29	18	15	24	15	776	2.6

FATALITIES ACCORDING TO INDUSTRIES (GROUPS 1-6)

	1971	1972	1973	1974	1975
Copper, nickel, and zinc mines	14	7	6	11	6
Gold mines	5	0	3	3	1
Iron mines	0	2	0	0	0
Silver-cobalt mines	0	0	0	1	0
Uranium mines	2	2	1	0	1
Non-metallic mines	0	1	0	1	0
Metallurgical works	5	1	2	1	2
Quarries	3	2	2	2	1
Clay, shale, sand, and gravel pits	0	3	1	5	4
Contract diamond-drilling	0	0	0	0	0
Total	29	18	15	24	15

FATALITIES AT MINES (GROUPS 1-6) Underground (Group 1)

CAUSE	CLASS OF ACCIDENT	1971		1972		1973		1974		1975	
		NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
Fall of ground	A	7	41	5	55	0	0	5	31	1	25
Explosives	B	1	6	0	0	1	11	2	13	0	0
Run of ore, rock, etc.	C	2	12	1	11	0	0	1	6	0	0
Shaft accidents	D	1	6	1	11	0	0	1	6	0	0
Fall down stope, raise, etc.	E	1	6	0	0	2	23	3	19	1	25
Haulage	F	4	23	2	23	2	23	2	13	1	25
Rockburst	G	0	0	0	0	1	11	0	0	0	0
Unclassified	H	1	6	0	0	3	32	2	12	1	25
Total		17	100	9	100	9	100	16	100	4	100

On Surface (Groups 2-6)

CAUSE	CLASS OF ACCIDENT	1971		1972		1973		1974		1975	
		NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
Falling objects	A	2	17	1	11	0	0	1	12	0	0
Explosives	B	0	0	0	0	0	0	0	0	0	0
Run of materials	C	1	8	1	11	0	0	1	13	2	18
Machinery	D	0	0	2	22	1	17	1	13	3	27
Fall of persons	E	3	25	0	0	1	17	1	12	1	9
Transportation and haulage	F	5	42	2	22	2	32	4	50	5	46
Chemicals and burns	G	1	8	1	11	1	17	0	0	0	0
Unclassified	H	0	0	2	23	1	17	0	0	0	0
Total		12	100	9	100	6	100	8	100	11	100

SUMMARY OF FATAL ACCIDENTS

DATE OF NO. ACCIDENT	NAME OF OPERATOR	NAME OF MINE PLANT OR LOCATION	NAME OF DECEASED
Group 1 Underground at Mines			
1 Jan. 25	Falconbridge Nickel Mines Limited	Fecunis North	A. J. Mongrain
2 Mar. 6	International Nickel Co. of Canada Limited	Creighton Mine	Leslie Gomory
3 Oct. 4	International Nickel Co. of Canada Limited	Frood Mine	Vernon Kavanagh
4 Aug. 18	Pamour Porcupine Mines Limited	Pamour Mine	Michel Reeves
Group 2 Surface at Mines			
5 May 31	Consolidated Canadian Faraday	Werner Lake	Donald L. Hagan
6 Sept. 4	Denison Mines Limited	Denison Mine	Franz Bach
7 Jan. 30	International Nickel Co. of Canada Limited	Frood Stobie Mine	Charles Murphy
8 Aug. 16	International Nickel Co. of Canada Limited	C. C. North Mine	Gilbert Boyer
Group 3 Metallurgical Works			
9 July 6	Algoma Steel Corporation Limited	Blast Furnace High Line Track Area	John Petingalo
10 Sept. 11	Falconbridge Nickel Mines Limited	Main Concentrator, Lot 11, Concession 3, Falconbridge Twp.	Charles L. Stafford
Group 4 Quarries			
11 Jan. 21	Silver Spring Mines	Township 168, 27 miles northeast of Iron Bridge, Algoma District	N. D. Pears
Group 5 Clay, Shale, Sand & Gravel			
12 Sept. 5	Alfred Larocque Gravel Pit	Lot 9, Concession 5, Caldwell Township, Verner, Ontario	Claude Brosseau
13 May 1	George Armstrong Co. Ltd.	Lot 48, Town of Fort Frances	Russell William Allen
14 Apr. 18	W. Lefebvre Sand & Gravel Ltd.	Lot 11, Concession 4, Kenyon Township, Glengarry County	Marcel Decoeur
15 Apr. 24	Springbank Sand & Gravel Ltd.	Mississauga	John Boyce
Group 6 Contract Diamond Drilling			
None			
Group 7 Fatalities not included in Fatal Accident Rates			
16 May 22	Quinte Marine and Salvage Co.	Lot 5, Concession 4, Marmora Township	Gerald Mills

(GROUPS 1-7) 1975

AGE	OCCUPATION	MARRIED (M)		CLASS OF ACCIDENT	CAUSE
		SINGLE (S)	WIDOWER (W)		
43	Driller	M		E	Fell down an inclined service raise from a steel bucket into sandfill.
53	Motorman	M		F	The mucking machine he was operating rolled & pinned him against wall of drift.
48	Blaster Boss	M		H	Fell from the top of a scooptram bucket pulling a ventilation damper down on top of him.
26	Development Miner	M		A	Struck by a piece of falling loose.
18	Ball Mill Operator	S		C	Buried by a flow of ore after an accidental fall into an ore bin.
48	Mill Operator "B"	M		E	Fell about 49 feet from walkway to concrete floor.
44	Yard Labourer	M		D	Crushing injury of chest due to tipping of salt spreader.
21	R.R. Car Loader	M		F	Squeezed between a moving railway car and car loading platform.
48	High Line Foreman	M		F	The locomotive he was riding on derailed and ran over him.
63	Mill Foreman	M		C	The ore underneath him, when he was inside a bin, gave way and buried him.
30	Machine Operator	M		F	Brain damage by being crushed when a Hough loader overturned.
21	Bystander	M		D	The slusher machine rolled over, pinning his head under the frame of the machine.
66	Crusher Foreman	M		D	Slipped and fell on unguarded rotating drive shaft.
27	Truck Driver & Crusherman	M		F	Crushed by a gravel truck passing over him.
62	Mechanic	M		F	Pinned between two front-end loaders.
19	Torchman	S			Fell about 100 feet down skipway on salvage operation.

Non-Fatal Accidents Mines (Group 1 & 2)

There were 51.477 million man-hours at mines in Ontario in 1975. During the year there were 3,402 injuries, giving a non-fatal accident rate of 66.1 per million man-hours.

NON-FATAL ACCIDENTS AT MINES, 1975

CAUSE	UNDERGROUND (GROUP 1)	ON SURFACE (GROUP 2)	TOTAL
Fall of person	506	124	630
Strain while lifting	335	80	415
Strain while moving	361	87	448
Crushed between two objects	194	32	226
Fall of rock or ore, drilling, scaling, etc.	197	—	197
Running into or striking object	129	32	161
Unclassified	147	37	184
Falling objects	87	28	115
Handling material other than rock or ore	89	22	111
Drilling machines	183	7	190
Flying objects, drilling, sledging, etc.	64	27	91
Nail, wire or splinter	83	16	99
Hand tool	71	24	95
Fall of loose rock or ore	62	2	64
Handling or tramming mine car	39	4	43
Machinery, general	7	16	23
Roll of broken rock or ore	47	1	48
Mechanical transportation	26	29	55
Rock or ore at chute	31	5	36
Burns	16	13	29
Mechanical loader	32	10	42
Tugger hoist, scraper, etc.	14	6	20
Fall down winze, raise or stope	11	—	11
Handling rock or ore	16	4	20
Cage skip or bucket in shaft	2	—	2
Dermatitis	17	5	22
Explosives	6	1	7
Noxious gas	5	2	7
Rockburst	4	—	4
Electricity	3	4	7
TOTAL	2784	618	3402

Metallurgical Works (Group 3)

There were 20.697 million man-hours at metallurgical works in Ontario in 1975. During the year there were 853 injuries giving a non-fatal accident rate of 41.2 per million man-hours.

NON-FATAL ACCIDENTS AT METALLURGICAL WORKS, 1975

CAUSE	CAUSE
Strain while lifting or moving	325
Fall of person	140
Running into or striking object	64
Handling materials	22
Crushed between two objects	83
Unclassified	32
Burned by slag or metal	27
Burns	23
Flying object, sledging, etc.	14
Hand tool	16
Falling object	21
Hoisting equipment, hood, sling or block	14
Machinery, general	12
Dermatitis, chemical burn	15
Nail, wire or splinter	4
Transportation	7
Noxious gas	17
Loading, unloading or handling car	11
Electricity	4
Fall of rock or ore	1
Roll of broken rock or ore	1
TOTAL	853

Quarries (Group 4)

There were 3.587 million man-hours at quarries in Ontario in 1975. During the year there were 128 injuries, giving a non-fatal accident rate of 35.7 per million man-hours.

NON-FATAL ACCIDENTS AT QUARRIES, 1975

CAUSE		CAUSE	
Strain while lifting or moving	31	Hand tool	5
Handling material other than rock or ore	1	Drilling Machines	2
Fall of rock or ore	1	Unclassified	1
Fall of person	9	Burns	1
Machinery	18	Falling object	13
Flying object, sledging, etc.	11	Running into or striking object	2
Fall of material during handling	5		
Crushed between two objects	10	TOTAL	128
Transportation	18		

Clay, Shale, Sand & Gravel Pits (Group 5)

There were 7.781 million man hours at clay, shale, sand and gravel pits in Ontario in 1975. During the year there were 87 injuries, giving a non-fatal accident rate of 11.2 per million man-hours.

NON-FATAL ACCIDENTS AT CLAY, SHALE, SAND & GRAVEL PITS, 1975

CAUSE		CAUSE	
Fall of person	21	Flying object	4
Fall of rock or ore	3	Drilling machines	2
Nail or splinter	3	Handling material	6
Strain while lifting or moving	21	Falling object	6
Machinery	12	Fall of material during handling	—
Crushed between two objects	3	Burns	1
Hand tools	—	Unclassified	1
Transportation	4		
Running into or striking object	—	TOTAL	87

Contract Diamond Drilling (Group 6)

There were .847 million man-hours at contract diamond drilling in Ontario in 1975. During the year there were 80 injuries, giving a non-fatal accident rate of 94.5 per million man-hours.

NON-FATAL ACCIDENTS AT DIAMOND DRILLING, 1975

CAUSE		CAUSE	
Slips and falls	23	Flying objects	1
Caught in or between objects	7	Inhalation, absorption, ingestion	1
Struck by objects	15	Explosives	—
Striking against objects	7	Burn or freeze	1
Strain or overexertion	10	Fall of rock	2
Falling object	7		
Unclassified	2	TOTAL	80
Wire, nail or splinter	4		

Infections 1975

Group	1	2	3	4	5	6	7	TOTAL
No. of Accidents	1	5	1	0	2	2	0	11

Infection (Groups 1-6) 1975

There were 11 recorded infections following a total of 3402 non-fatal injuries in 1975. Nine were underground and four were on surface at mines. Two were at metallurgical works. One was at quarries. One was at pits. Two were contract drillers.

Electrical Accidents (Groups 1-6) 1975

	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	TOTAL
Fatal	0	0	0	0	0	0	0	2	1	0	3
Non-Fatal	11	9	11	11	12	13	8	15	8	6	104
Total	11	9	11	11	12	13	8	17	9	6	107

Explosives Accidents Due to Explosives 1975

CAUSE		NO. OF ACCIDENTS	PERSONS INJURED		
			NON- FATALLY	FATALLY	TOTAL
1.	Injury due to blast concussion	1	1	—	1
2.	Fly rock	1	1	—	1
3.	Drilled into bootleg	2	4	—	4
TOTAL		4	6	—	6



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